

CLAIMS

1. A method for fabricating a nitride semiconductor laser device, which comprises;

5 a first step to form a multi-layered semiconductor on a substrate, the multi-layered semiconductor containing at least an n-type nitride semiconductor layer, an active layer, and a p-type nitride semiconductor layer;

10 a second step to expose the surfaces of the n-type nitride semiconductor layer and the p-type nitride semiconductor layer at different heights by selectively etching the multi-layered semiconductor;

15 a third step to cover the surface of the multi-layered semiconductor, including the exposed surfaces of the n-type nitride semiconductor layer and the p-type nitride semiconductor layer, with an insulating film that has a thickness greater than the difference in levels between the exposed surface of the n-type nitride semiconductor layer and the outermost surface of the p-type nitride semiconductor layer;

20 a fourth step to flatten the surface of the insulating film; and

a fifth step to form an n-type electrode and a p-type electrode that are electrically connected to the n-type nitride semiconductor layer and the p-type nitride

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semiconductor layer, respectively, through the insulating film.

2. The method for fabricating a nitride
5 semiconductor laser device according to Claim 1, which further comprises;

a sixth step, following the fifth step, to
press-fit the surface of the insulating film to a sub-
mount containing a first wire and a second wire by using
10 heat-melted solder structures and electrically connect the
n-type electrode and the p-type electrode to the first
wire and the second wire, respectively.

3. The method for fabricating a nitride
15 semiconductor laser device according to Claim 1, wherein
the insulating film contains fine-grains of a metal or a
semiconductor.

4. A nitride semiconductor laser device, which
20 comprises:

a multi-layered semiconductor that is formed on
a substrate and that contains at least an n-type nitride
semiconductor layer, an active layer, and a p-type nitride
semiconductor layer; and

25 an n-type electrode and a p-type electrode that

are electrically connected to the n-type nitride semiconductor layer and the p-type nitride semiconductor layer, respectively;

characterized in that the nitride semiconductor laser device comprises an insulating film that covers the multi-layered semiconductor;

the n-type electrode and the p-type electrode are electrically connected to the n-type nitride semiconductor layer and the p-type nitride semiconductor layer, respectively through the insulating film;

the thickness of the insulating film is greater than the difference in levels between the surface with which the n-type electrode and the n-type nitride semiconductor layer come into contact and the outermost surface of the p-type nitride semiconductor layer; and

the surface of the insulating film is flat.

5. The nitride semiconductor laser device according to Claim 4, which further comprises a sub-mount that has a first wire and a second wire that are electrically connected to the n-type electrode and the p-type electrode through solder structures.